

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	949	((crystal\$) or (xtal)) same (11-beta-hydroxysteroid dehydrogenase)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/03/26 11:50
L2	2	((crystal\$) or (xtal)) same ("11-beta-hydroxysteroid dehydrogenase")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/03/26 11:46
L3	808	(435/190).CCLS.	US-PGPUB; USPAT; DERWENT	OR	OFF	2007/03/26 11:35
L4	9	L3 and ("11-beta-hydroxysteroid dehydrogenase")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/03/26 11:35
L5	0	L4 and crystal\$	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/03/26 11:35
L6	5497	(435/183).CCLS.	US-PGPUB; USPAT; DERWENT	OR	OFF	2007/03/26 11:35
L7	0	L5 and crystal\$	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/03/26 11:37
L8	3	aertgeerts.in. and dehydrogenase	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/03/26 11:38
L9	0	brodsky.in. and dehydrogenase	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/03/26 11:38
L10	697	brodsky.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/03/26 11:38
L11	29	brodsky.in. and crystal	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/03/26 11:39
L12	96	chi.in. and dehydrogenase	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/03/26 11:39

EAST Search History

L13	6	chi.in. and hydroxysteroid	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/03/26 11:39
L14	6	chi.in. and \$hydroxysteroid\$	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/03/26 11:39
L15	0	hilgers.in. and \$hydroxysteroid\$	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/03/26 11:40
L16	0	hilgers.in. and \$hydroxysteroid	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/03/26 11:40
L17	3	hilgers.in. and dehydrogenase	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/03/26 11:40
L18	2	hosfield.in. and dehydrogenase	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/03/26 11:41
L19	0	skene.in. and dehydrogenase	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/03/26 11:41
L20	104	((crystal\$) or (xtal)) same (\$hydroxysteroid)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/03/26 11:46
L21	0	L20 and dehydrgenase	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/03/26 11:50
L22	87	L20 and dehydrogenase	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/03/26 11:50
S6	195	((crystal\$) or (xtal) or (3D) or (xray) or (x-ray)) same ("calcium channel")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/03/05 09:04
S12	240	((crystal\$) or (xtal)) same ("calcium" with "channel")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/03/26 11:31



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Home Search Results Queries

Help 6 Structure Hits 1 Unreleased Structure 3 Citations 10 Ligand Hits 46 Web Page Hits

1

- ☒ Results (1-6 of 6)
- ☒ Results ID List
- ☒ Modify / Refine this Search
- ☒ 1 Structures Awaiting Release
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☒ 1Y5R



The crystal structure of murine 11b-hydroxysteroid dehydrogenase complexed with corticosterone

Release Date: 17-May-2005 Exp. Method: X Ray Diffraction

Resolution: 3.00 Å

Characteristics

Classification

Oxidoreductase

Compound

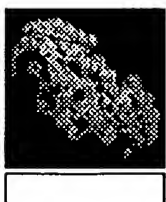
Polymer: 1 Molecule: Corticosteroid 11-beta-dehydrogenase isozyme 1 Chains: A,B EC

no.: 1.1.1.146

Authors

Zhang, J., Osslund, T.D., Plant, M.H., Clogston, C.L., Nybo, R.E., Xiong, F., Delaney, J.M., Jordai

☒ 1Y5M



The crystal structure of murine 11b-hydroxysteroid dehydrogenase: an important therapeutic target for diabetes

Release Date: 17-May-2005 Exp. Method: X Ray Diffraction

Resolution: 2.30 Å

Characteristics

Classification

Oxidoreductase

Compound

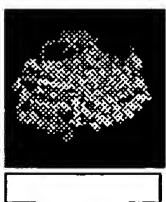
Polymer: 1 Molecule: Corticosteroid 11-beta-dehydrogenase, isozyme 1 Fragment: sequence database residues 24-292 Chains: A,B EC

no.: 1.1.1.146

Authors

Zhang, J., Osslund, T.D., Plant, M.H., Clogston, C.L., Nybo, R.E., Xiong, F., Delaney, J.M., Jordai S.R.

☒ 2BEL



STRUCTURE OF HUMAN 11-BETA-HYDROXYSTEROID DEHYDROGENASE IN COMPLEX WITH NADP AND CARBENOXOLONE

Release Date: 06-Dec-2004 Exp. Method: X Ray Diffraction

Resolution: 2.11 Å

Characteristics

Classification

Oxidoreductase

Compound

Polymer: 1 Molecule: CORTICOSTEROID 11-BETA-DEHYDROGENASE ISOZYME 1 Fragment: RESIDU

26-284 Chains: A,B,C,D EC no.: 1.1.1.146

Authors

Wu, X., Kavanagh, K., Svensson, S., Elleby, B., M., Von Delft, F., Marsden, B., Jornvall, H., Abrahmsen, L., Oppermann, U.

☒ 1XU9



Crystal Structure of the Interface Closed Conformation of 11b-hydroxysteroid



dehydrogenase isozyme 1

Characteristics Release Date: 02-Nov-2004 Exp. Method: X Ray Diffraction

Classification Resolution: 1.55 Å

Compound Polymer: 1 Molecule: Corticosteroid 11-beta-dehydrogenase, isozyme 1 Mutation: C272S

Chains: A,B,C,D EC no.: 1.1.1.146

Authors Hosfield, D.J., Wu, Y., Skene, R.J., Hilger, M., Jennings, A., Snell, G.P., Aertgeerts, K.

☒ **1XU7**


Crystal Structure of the Interface Open Conformation of Tetrameric 11b-HSD1

Characteristics Release Date: 02-Nov-2004 Exp. Method: X Ray Diffraction

Classification Resolution: 1.80 Å

Compound Polymer: 1 Molecule: Corticosteroid 11-beta-dehydrogenase, isozyme 1 Mutation: C272S

Chains: A,B,C,D EC no.: 1.1.1.146

Authors Hosfield, D.J., Wu, Y., Skene, R.J., Hilger, M., Jennings, A., Snell, G.P., Aertgeerts, K.

☒ **2IRW**


Human 11-beta-Hydroxysteroid Dehydrogenase (HSD1) with NADP and Adamantane Ether Inhibitor

Characteristics Release Date: 23-Jan-2007 Exp. Method: X Ray Diffraction

Classification Resolution: 3.10 Å

Compound Polymer: 1 Molecule: Corticosteroid 11-beta-dehydrogenase isozyme 1 Fragment: dehydrogenas domain (residues 25-288) Chains: A,B,C,D,E,F,G,H

no.: 1.1.1.146

Authors Patel, J.R., Shuai, Q., Dinges, J., Winn, M., Pliushchev, M., Fung, S., Monzon, K., Chiou, W., Wang, J., Pan, L., Wagaw, S., Engstrom, K., Kerdesky, F.A., Longenecker, K., Judge, R., W., Imade, H.M., Stolarik, D., Beno, D.W., Brun M., Chovan, L.E., Sham, H.L., Jacobson, P., Link J.T.



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1 2 3 4 5 6

☒ 1FDS



Characteristics

Classification

Compound

Authors

HUMAN 17-BETA-HYDROXYSTEROID-DEHYDROGENASE TYPE 1 COMPLEXED WITH 17-BETA-ESTRADIOL

Release Date: 12-Feb-1997 **Exp. Method:** X Ray Diffraction

Resolution: 1.70 Å

Dehydrogenase

Polymer: 1 **Molecule:** 17-BETA-HYDROXYSTEROID-DEHYDROGENASE **Chains:** _ **EC no.:** 1.1.1.62

Breton, R., Housset, D., Mazza, C., Fontecilla-Camps, J.C.

☒ 1FDT



Characteristics

Classification

Compound

Authors

HUMAN 17-BETA-HYDROXYSTEROID-DEHYDROGENASE TYPE 1 COMPLEXED WITH ESTRADIOL AND NADP+

Release Date: 12-Feb-1997 **Exp. Method:** X Ray Diffraction

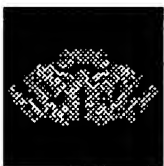
Resolution: 2.20 Å

Dehydrogenase

Polymer: 1 **Molecule:** 17-BETA-HYDROXYSTEROID-DEHYDROGENASE **Chains:** _ **EC no.:** 1.1.1.62

Breton, R., Housset, D., Mazza, C., Fontecilla-Camps, J.C.

☒ 1A27



Characteristics

Classification

Compound

Authors

HUMAN 17-BETA-HYDROXYSTEROID-DEHYDROGENASE TYPE 1 C-TERMINAL DELETION MUTANT COMPLEXED WITH ESTRADIOL AND NADP+

Release Date: 27-May-1998 **Exp. Method:** X Ray Diffraction

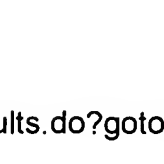
Resolution: 1.90 Å

Dehydrogenase

Polymer: 1 **Molecule:** 17-BETA-HYDROXYSTEROID-DEHYDROGENASE **Mutation:** C-TERMINAL DELE (290 - 327) **Chains:** _ **EC no.:** 1.1.1.62

Mazza, C.

☒ 1FDW



Characteristics


HUMAN 17-BETA-HYDROXYSTEROID-DEHYDROGENASE TYPE 1 MUTANT H221Q COMPLEXED WITH ESTRADIOL

Release Date: 27-May-1998 **Exp. Method:** X Ray Diffraction

- ☒ Results (1-10 of 60)
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**Classification****Resolution:** 2.70 Å**Dehydrogenase****Compound**

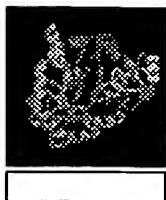
Polymer: 1 Molecule: 17-BETA-HYDROXYSTEROID
 DEHYDROGENASE Mutation: H221Q Chains: _ E
 no.: 1.1.1.62 

Authors

**Mazza, C., Breton, R., Housset, D., Fontecilla-
 Camps, J.C.**

☒ **1RAL**

**THREE-DIMENSIONAL STRUCTURE OF RAT
 LIVER 3ALPHA-HYDROXYSTEROID(SLASH)
 DIHYDRODIOL DEHYDROGENASE: A MEMBER
 OF THE ALDO-KETO REDUCTASE SUPERFAMILY**

**Characteristics****Release Date:** 30-Apr-1994 **Exp. Method:** X Ray Diffractor**Classification****Resolution:** 3.00 Å**Oxidoreductase****Compound**

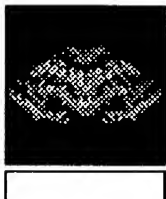
Polymer: 1 Molecule: 3-ALPHA-HYDROXYSTEROID
 DEHYDROGENASE Chains: _ EC no.: 1.1.1.50 

Authors

**Hoog, S.S., Pawlowski, J.E., Alzari, P.M., Pennir
 T.M., Lewis, M.**

☒ **1IOL**

**ESTROGENIC 17-BETA HYDROXYSTEROID
 DEHYDROGENASE COMPLEXED 17-BETA-
 ESTRADIOL**

**Characteristics****Release Date:** 07-Jul-1997 **Exp. Method:** X Ray Diffraction**Classification****Resolution:** 2.30 Å**Oxidoreductase****Compound**

Polymer: 1 Molecule: ESTROGENIC 17-BETA
 HYDROXYSTEROID DEHYDROGENASE Chains: _
 EC no.: 1.1.1.62 

Authors

**Azzi, A., Rehse, P.H., Zhu, D.W., Campbell,
 R.L., Labrie, F., Lin, S.X.**

☒ **1BHS**

**HUMAN ESTROGENIC 17BETA-
 HYDROXYSTEROID DEHYDROGENASE**

**Characteristics****Release Date:** 07-Dec-1996 **Exp. Method:** X Ray Diffractor**Classification****Resolution:** 2.20 Å**Oxidoreductase****Compound**

Polymer: 1 Molecule: 17BETA-HYDROXYSTEROID
 DEHYDROGENASE Chains: _ EC no.: 1.1.1.62 

Authors

**Ghosh, D., Pletnev, V.Z., Zhu, D.W., Wawrzak,
 Z., Duax, W.L., Pangborn, W., Labrie, F., Lin, S.**

☒ **1DHT**

**ESTROGENIC 17-BETA HYDROXYSTEROID
 DEHYDROGENASE COMPLEXED
 DIHYDROTESTOSTERONE**

**Characteristics****Release Date:** 25-Sep-1999 **Exp. Method:** X Ray Diffractor**Classification****Resolution:** 2.24 Å**Oxidoreductase****Compound**

Polymer: 1 Molecule: ESTROGENIC 17-BETA
 HYDROXYSTEROID DEHYDROGENASE Chains: ,
 EC no.: 1.1.1.62 

Authors

**Han, Q., Campbell, R.L., Gangloff, A., Huang,
 Y.W., Lin, S.X.**

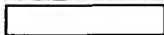
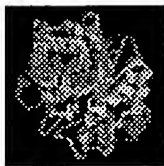
☒ 3DHE**Characteristics****Classification****Compound****Authors****ESTROGENIC 17-BETA HYDROXYSTEROID
DEHYDROGENASE COMPLEXED
DEHYDROEPIANDROSTERONE**

Release Date: 25-Sep-1999 Exp. Method: X Ray Diffraction

Resolution: 2.30 Å

OxidoreductasePolymer: 1 Molecule: ESTROGENIC 17-BETA
HYDROXYSTEROID DEHYDROGENASE Chains: 1

EC no.: 1.1.1.62

**Han, Q., Campbell, R.L., Gangloff, A., Huang,
Y.W., Lin, S.X.**☒ 2F38**Characteristics****Classification****Compound****Authors****Crystal structure of prostaglandin F synthase
containing bimatoprost**

Release Date: 31-Oct-2006 Exp. Method: X Ray Diffraction

Resolution: 2.00 Å

OxidoreductasePolymer: 1 Molecule: Aldo-keto reductase family 1
member C3 Chains: A EC no.: 1.3.1.20

1.1.1.213 1.1.1.188 1.1.1.62

**Komoto, J., Yamada, T., Watanabe, K., Woodwa
D.F., Takusagawa, F.**

1 2 3 4 5 6

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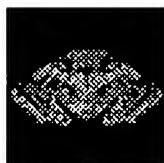
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- ☒ Results per Page
- ☒ Show Query Details
- ☒ Results Help

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1 2 3 4 5 6

☒ 1QYV



Characteristics

Classification

Compound

Authors

Crystal structure of human estrogenic 17beta-hydroxysteroid dehydrogenase complex with NADP

Release Date: 03-Aug-2004 Exp. Method: X Ray Diffraction

Resolution: 1.81 Å

Oxidoreductase

Polymer: 1 Molecule: Estradiol 17 beta-dehydrogenas

Chains: A EC no.: 1.1.1.62

Shi, R., Lin, S.X.

☒ 1QYW



Characteristics

Classification

Compound

Authors

Crystal structure of human estrogenic 17beta-hydroxysteroid dehydrogenase complex with androstenedione and NADP

Release Date: 03-Aug-2004 Exp. Method: X Ray Diffraction

Resolution: 1.63 Å

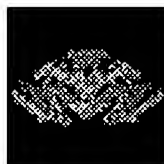
Oxidoreductase

Polymer: 1 Molecule: Estradiol 17 beta-dehydrogenas

Chains: A EC no.: 1.1.1.62

Shi, R., Lin, S.X.

☒ 1QYX



Characteristics

Classification

Compound

Authors

Crystal structure of human estrogenic 17beta-hydroxysteroid dehydrogenase complex with androstenedione and NADP

Release Date: 03-Aug-2004 Exp. Method: X Ray Diffraction

Resolution: 1.89 Å

Oxidoreductase

Polymer: 1 Molecule: Estradiol 17 beta-dehydrogenas

Chains: A EC no.: 1.1.1.62

Shi, R., Lin, S.X.

☒ 1AFS



Characteristics

RECOMBINANT RAT LIVER 3-ALPHA-HYDROXYSTEROID DEHYDROGENASE (3-ALPHA-HSD) COMPLEXED WITH NADP AND TESTOSTERONE

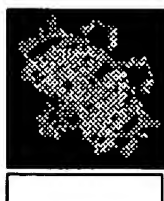
Release Date: 08-Oct-1997 Exp. Method: X Ray Diffraction

Resolution: 2.50 Å

Oxidoreductase

**Classification****Compound****Authors**

Polymer: 1 Molecule: 3-ALPHA-HYDROXYSTEROID DEHYDROGENASE Chains: A,B EC no.: 1.1.1.50
 Bennett, M.J., Albert, R.H., Jez, J.M., Ma, H., Penning, T.M., Lewis, M.

☒ **1AHH****Characteristics****Classification****Compound****7 ALPHA-HYDROXYSTEROID DEHYDROGENASE COMPLEXED WITH NAD+**

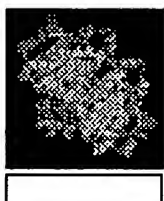
Release Date: 14-Oct-1996 Exp. Method: X Ray Diffraction
 Resolution: 2.30 Å

Oxidoreductase

Polymer: 1 Molecule: 7 ALPHA-HYDROXYSTEROID DEHYDROGENASE Chains: A,B EC no.: 1.1.1.159

Authors

Tanaka, N., Nonaka, T., Tanabe, T., Yoshimoto, T., Tsuru, D., Mitsui, Y.

☒ **1AHI****Characteristics****Classification****Compound****7 ALPHA-HYDROXYSTEROID DEHYDROGENASE COMPLEXED WITH NADH AND 7-OXO GLYCOCHENODEOXYCHOLIC ACID**

Release Date: 14-Oct-1996 Exp. Method: X Ray Diffraction
 Resolution: 2.30 Å

Oxidoreductase

Polymer: 1 Molecule: 7 ALPHA-HYDROXYSTEROID DEHYDROGENASE Chains: A,B EC no.: 1.1.1.159

Authors

Tanaka, N., Nonaka, T., Tanabe, T., Yoshimoto, T., Tsuru, D., Mitsui, Y.

☒ **1FMC****Characteristics****Classification****Compound****7-ALPHA-HYDROXYSTEROID DEHYDROGENASE COMPLEX WITH NADH AND 7-OXO GLYCOCHENODEOXYCHOLIC ACID**

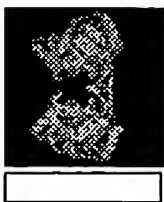
Release Date: 08-Nov-1996 Exp. Method: X Ray Diffraction
 Resolution: 1.80 Å

Oxidoreductase

Polymer: 1 Molecule: 7 ALPHA-HYDROXYSTEROID DEHYDROGENASE Chains: A,B EC no.: 1.1.1.159
 Other Details: LIGANDS ARE NADH AND 7-OXO GLYCOCHENODEOXYCHOLIC ACID (CHO)

Authors

Tanaka, N., Nonaka, T., Tanabe, T., Yoshimoto, T., Tsuru, D., Mitsui, Y.

☒ **1LWI****Characteristics****Classification****Compound****3-ALPHA-HYDROXYSTEROID/DIHYDRODIOL DEHYDROGENASE FROM RATTUS NORVEGICUS**

Release Date: 07-Dec-1996 Exp. Method: X Ray Diffraction
 Resolution: 2.70 Å

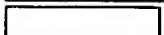
Oxidoreductase

Polymer: 1 Molecule: 3-ALPHA-HYDROXYSTEROID/DIHYDRODIOL DEHYDROGENASE Chains: A,B EC no.: 1.1.1.213
 Other Details: FORMERLY EC 1.1.1.50, HOWEVER, NEW CONVENTION DISTINGUISHES THIS AS AN

CLASS DEHYDROGENASE

Authors

Bennett, M.J., Schlegel, B.P., Jez, J.M., Penning, T.M., Lewis, M.

☒ 1I5R

Characteristics

TYPE 1 17-BETA HYDROXYSTEROID DEHYDROGENASE EM1745 COMPLEX

Release Date: 11-Mar-2003 Exp. Method: X Ray Diffraction

Resolution: 1.60 Å

Classification

Oxidoreductase

Compound

Polymer: 1 Molecule: TYPE 1 17 BETA-HYDROXYSTEROID DEHYDROGENASE Chains: 1

EC no.: 1.1.1.62

Authors

Qiu, W., Campbell, R.L., Gangloff, A., Dupuis, P., Boivin, R.P., Tremblay, M.R., Poirier, D., Lin, S.X.

☒ 1FDU

Characteristics

HUMAN 17-BETA-HYDROXYSTEROID-DEHYDROGENASE TYPE 1 MUTANT H221L COMPLEXED WITH ESTRADIOL AND NADP+

Release Date: 27-May-1998 Exp. Method: X Ray Diffraction

Resolution: 2.70 Å

Classification

Dehydrogenase

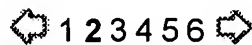
Compound

Polymer: 1 Molecule: 17-BETA-HYDROXYSTEROID DEHYDROGENASE Mutation: H221L Chains: A,B,C

EC no.: 1.1.1.62

Authors

Mazza, C., Breton, R., Housset, D., Fontecilla-Camps, J.C.





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☒ **1FDV**



HUMAN 17-BETA-HYDROXYSTEROID-DEHYDROGENASE TYPE 1 MUTANT H221L COMPLEXED WITH NAD+



Characteristics

Release Date: 27-May-1998 Exp. Method: X Ray Diffraction

Classification

Resolution: 3.10 Å

Dehydrogenase

Compound

Polymer: 1 Molecule: 17-BETA-HYDROXYSTEROID DEHYDROGENASE Mutation: H221L Chains: A,B,C

EC no.: 1.1.1.62

Authors

Mazza, C., Breton, R., Housset, D., Fontecilla-Camps, J.C.

☒ **2FGB**



Crystal structure of human 17bet a-hydroxysteroid dehydrogenase type 5 in complexes with PEG and NADP



Characteristics

Release Date: 12-Dec-2006 Exp. Method: X Ray Diffraction

Classification

Resolution: 1.35 Å

Oxidoreductase

Compound

Polymer: 1 Molecule: Aldo-keto reductase family 1 member C3 Chains: A EC no.: 1.1.1.62

1.1.1.213 1.1.1.188

Authors

Qiu, W., Zhou, M., Azzi, A., Ghanmi, D., Luu-Thi V., Labrie, F., Lin, S.X.

☒ **1YB1**



Crystal structure of human 17-beta-hydroxysteroid dehydrogenase type XI



Characteristics

Release Date: 28-Dec-2004 Exp. Method: X Ray Diffraction

Classification

Resolution: 1.95 Å

Oxidoreductase

Compound

Polymer: 1 Molecule: 17-beta-hydroxysteroid dehydrogenase type XI Chains: A,B EC no.: 1.1.1.6

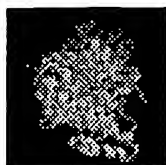
Authors

Lukacik, P., Bunkoczi, G., Kavanagh, K., Ng, S., Delft, F., Bray, J., Edwards, A., Arrowsmith, C., Sundstrom, M., Oppermann, U.

☒ **1FK8**



THE CRYSTAL STRUCTURE OF THE BINARY COMPLEX WITH NAD OF 3-ALPHA-HYDROXYSTEROID DEHYDROGENASE FROM

**Characteristics****Classification****Compound****Authors****COMAMONAS TESTOSTERONI, A MEMBER OF THE SHORT CHAIN DEHYDROGENASE/REDUCTASE FAMILY**

Release Date: 17-Jan-2001 Exp. Method: X Ray Diffraction

Resolution: 1.95 Å

Oxidoreductase

Polymer: 1 Molecule: 3ALPHA-HYDROXYSTEROID DEHYDROGENASE/CARBONYL REDUCTASE

Chains: A,B EC no.: 1.1.1.50

Grimm, C., Maser, E., Mobus, E., Klebe, G., Reut K., Ficner, R.

☒ **1FJH****THE CRYSTAL STRUCTURE OF 3-ALPHA-HYDROXYSTEROID DEHYDROGENASE FROM COMAMONAS TESTOSTERONI, A MEMBER OF THE SHORT CHAIN DEHYDROGENASE/REDUCTASE FAMILY**

Release Date: 17-Jan-2001 Exp. Method: X Ray Diffraction

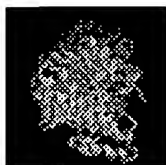
Resolution: 1.68 Å

Oxidoreductase

Polymer: 1 Molecule: 3ALPHA-HYDROXYSTEROID DEHYDROGENASE/CARBONYL REDUCTASE

Chains: A,B EC no.: 1.1.1.50

Grimm, C., Maser, E., Mobus, E., Klebe, G., Reut K., Ficner, R.

**Characteristics****Classification****Compound****Authors**☒ **2HSD****THE REFINED THREE-DIMENSIONAL STRUCTURE OF 3ALPHA,20BETA-HYDROXYSTEROID DEHYDROGENASE AND POSSIBLE ROLES OF THE RESIDUES CONSERVED IN SHORT-CHAIN DEHYDROGENASES**

Release Date: 31-Aug-1994 Exp. Method: X Ray Diffraction

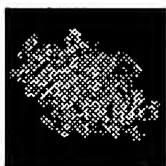
Resolution: 2.64 Å

Oxidoreductase

Polymer: 1 Molecule: 3-ALPHA, 20 BETA-HYDROXYSTEROID DEHYDROGENASE

Chains: A,B,C,D EC no.: 1.1.1.53

Ghosh, D., Wawrzak, Z., Weeks, C.M., Duax, W.L., Erman, M.

**Characteristics****Classification****Compound****Authors**☒ **1ZQ5****Crystal structure of human androgenic 17beta-hydroxysteroid dehydrogenase type 5 in complexed with a potent inhibitor EM1404**

Release Date: 12-Dec-2006 Exp. Method: X Ray Diffraction

Resolution: 1.30 Å

Oxidoreductase

Polymer: 1 Molecule: Aldo-keto reductase family 1 member C3 Chains: A EC no.: 1.1.1.62 1.3.1.21 1.1.1.188

Qiu, W., Zhou, M., Ghanmi, D., Luu-The, V., Lab F., Lin, S.-X.

**Characteristics****Classification****Compound****Authors**☒ **1HDC****MECHANISM OF INHIBITION OF 3ALPHA,20BETA-HYDROXYSTEROID**

DEHYDROGENASE BY A LICORICE-DERIVED STEROIDAL INHIBITOR**Characteristics****Release Date:** 07-Feb-1995 **Exp. Method:** X Ray Diffraction**Classification****Resolution:** 2.20 Å**Oxidoreductase****Compound**

Polymer: 1 Molecule: 3-ALPHA, 20 BETA-HYDROXYSTEROID DEHYDROGENASE

Chains: A,B,C,D EC no.: 1.1.1.53

Authors**Ghosh, D., Erman, M., Wawrzak, Z., Duax, W.L., Pangborn, W.**☒ **1JTV****Crystal structure of 17beta-Hydroxysteroid Dehydrogenase Type 1 complexed with Testosterone****Characteristics****Release Date:** 24-Jun-2003 **Exp. Method:** X Ray Diffraction**Classification****Resolution:** 1.54 Å**Oxidoreductase****Compound**

Polymer: 1 Molecule: 17 beta-hydroxysteroid dehydrogenase type 1 Chains: A EC no.: 1.1.1.62

Authors**Gangloff, A., Shi, R., Nahoum, V., Lin, S.X.**☒ **1EQU****TYPE 1 17-BETA HYDROXYSTEROID DEHYDROGENASE EQUILIN COMPLEXED WITH NADP+****Characteristics****Release Date:** 02-Dec-1999 **Exp. Method:** X Ray Diffraction**Classification****Resolution:** 3.00 Å**Oxidoreductase****Compound**

Polymer: 1 Molecule: PROTEIN (ESTRADIOL 17 BETA DEHYDROGENASE 1) Chains: A,B EC no.: 1.1.1.62

Authors**Sawicki, M.W., Erman, M., Puranen, T., Vihko, P., Ghosh, D.**

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Characteristics

Classification

Compound

Authors

1 2 3 4 5 6

Crystal structure of the 3-alpha-hydroxysteroid dehydrogenase from Pseudomonas sp. B-0831 complexed with NADH

Release Date: 15-Aug-2006 Exp. Method: X Ray Diffraction

Resolution: 1.80 Å

Oxidoreductase

Polymer: 1 Molecule: 3-alpha-hydroxysteroid dehydrogenase Chains: A,B EC no.: 1.1.1.50 Nakamura, S., Oda, M., Kataoka, S., Ueda, S., Uchiyama, S., Yoshida, T., Kobayashi, Y., Ohkubo, T.

☒ 1Y5R



Characteristics

Classification

Compound

Authors

The crystal structure of murine 11b-hydroxysteroid dehydrogenase complexed with corticosterone

Release Date: 17-May-2005 Exp. Method: X Ray Diffraction

Resolution: 3.00 Å

Oxidoreductase

Polymer: 1 Molecule: Corticosteroid 11-beta-dehydrogenase, isozyme 1 Chains: A,B EC no.: 1.1.1.146

Zhang, J., Osslund, T.D., Plant, M.H., Clogston, C.L., Nybo, R.E., Xiong, F., Delaney, J.M., Jordai

☒ 1IKT



Characteristics

Classification

Compound

Authors

LIGANDED STEROL CARRIER PROTEIN TYPE 2 (SCP-2) LIKE DOMAIN OF HUMAN MULTIFUNCTIONAL ENZYME TYPE 2 (MFE-2)

Release Date: 14-Nov-2001 Exp. Method: X Ray Diffraction

Resolution: 1.75 Å

Oxidoreductase

Polymer: 1 Molecule: ESTRADIOL 17 BETA-DEHYDROGENASE 4 Fragment: C-terminal domain Residues 618-736 Chains: A EC no.: 1.1.1.62 Haapalainen, A.M., van Aalten, D.M., Merilainen G., Jalonen, J.E., Pirila, P., Wierenga, R.K., Hiltunen, J.K., Glumoff, T.

☒ 1IHI



Crystal Structure of Human Type III 3-alpha-Hydroxysteroid Dehydrogenase/Bile Acid

**Characteristics****Binding Protein (AKR1C2) Complexed with NADP+ and Ursodeoxycholate**

Release Date: 03-Oct-2001 Exp. Method: X Ray Diffraction

Resolution: 3.00 Å

Classification**Oxidoreductase****Compound**

Polymer: 1 Molecule: 3-ALPHA-HYDROXYSTEROID DEHYDROGENASE Chains: A,B EC no.: 1.1.1.52

Authors

Jin, Y., Stayrook, S.E., Albert, R.H., Palackal, N.T., Penning, T.M., Lewis, M.

☒ **1Q13****Crystal structure of rabbit 20alpha hydroxysteroid dehydrogenase in ternary complex with NADP and testosterone**

Release Date: 16-Nov-2004 Exp. Method: X Ray Diffraction

Resolution: 2.08 Å

Characteristics**Classification****Oxidoreductase****Compound**

Polymer: 1 Molecule: Prostaglandin-E2 9-reductase Chains: A,B EC no.: 1.1.1.189 1.1.1.149

Authors

Couture, J.-F., Legrand, P., Cantin, L., Labrie, F., Luu-The, V., Breton, R.

☒ **1RY0****Structure of prostaglandin F synthase with prostaglandin D2**

Release Date: 02-Nov-2004 Exp. Method: X Ray Diffraction

Resolution: 1.69 Å

Characteristics**Classification****Oxidoreductase****Compound**

Polymer: 1 Molecule: Aldo-keto reductase family 1 member C3 Chains: A,B EC no.: 1.1.1.- 1.3.1.20 1.1.1.188

Authors

Komoto, J., Yamada, T., Watanabe, K., Takusagawa, F.

☒ **1RY8****Prostaglandin F synthase complexed with NADPH and rutin**

Release Date: 02-Nov-2004 Exp. Method: X Ray Diffraction

Resolution: 1.69 Å

Characteristics**Classification****Oxidoreductase****Compound**

Polymer: 1 Molecule: Aldo-keto reductase family 1 member C3 Chains: A,B EC no.: 1.1.1.- 1.3.1.20 1.1.1.188

Authors

Komoto, J., Yamada, T., Watanabe, K., Takusagawa, F.

☒ **1Y5M****The crystal structure of murine 11b-hydroxysteroid dehydrogenase: an important therapeutic target for diabetes**


Release Date: 17-May-2005 Exp. Method: X Ray Diffraction

Resolution: 2.30 Å

Characteristics**Classification****Oxidoreductase****Compound**

Polymer: 1 Molecule: Corticosteroid 11-beta-dehydrogenase, isozyme 1 Fragment: sequence

database residues 24-292 Chains: A,B EC

no.: 1.1.1.146 **Authors**

Zhang, J., Osslund, T.D., Plant, M.H., Clogston, C.L., Nybo, R.E., Xiong, F., Delaney, J.M., Jordan, S.R.


☒ **1ZBQ****Crystal Structure Of Human 17-Beta-Hydroxysteroid Dehydrogenase Type 4 In Complex With NAD****Characteristics**

Release Date: 26-Apr-2005 Exp. Method: X Ray Diffraction

Resolution: 2.19 Å

Classification**Oxidoreductase****Compound**

Polymer: 1 Molecule: 17-beta-hydroxysteroid dehydrogenase 4 Fragment: N-terminal SHORT CH, DEHYDROGENASE DOMAIN Chains: A,B,C,D,E,F



no.: 1.1.1.35 **Authors**

Lukacik, P., Shafqat, N., Kavanagh, K., Bray, J., Delft, F., Edwards, A., Arrowsmith, C., Sundstro M., Oppermann, U.

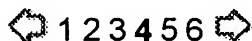
☒ **2HDJ****Crystal structure of human type 3 3alpha-hydroxysteroid dehydrogenase in complex with NADP(H)****Characteristics**

Release Date: 05-Dec-2006 Exp. Method: X Ray Diffraction

Resolution: 2.00 Å

Classification**Oxidoreductase****Compound**Polymer: 1 Molecule: Aldo-keto reductase family 1 member C2 Chains: A,B EC no.: 1.-.-.- 1.3.1.20 
1.1.1.213 **Authors**

Faucher, F., Pereira de Jesus-Tran, K., Cantin, L., Luu-The, V., Labrie, F., Breton, R.



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☒ 1Q5M



1 2 3 4 5 6

Binary complex of rabbit 20alpha-hydroxysteroid dehydrogenase with NADPH

Release Date: 18-May-2004 Exp. Method: X Ray Diffraction

Resolution: 1.32 Å

Characteristics

Classification

Oxidoreductase

Compound

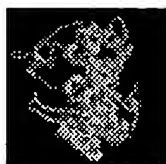
Polymer: 1 Molecule: Prostaglandin-E2 9-reductase

Chains: A,B EC no.: 1.1.1.189 1.1.1.149

Authors

Couture, J.F., Legrand, P., Cantin, L., Labrie, F., Luu-The, V., Breton, R.

☒ 1S1R



Crystal structures of prostaglandin D2 11-ketoreductase (AKR1C3) in complex with the non-steroidal anti-inflammatory drugs flufenamic acid and indomethacin

Release Date: 23-Mar-2004 Exp. Method: X Ray Diffraction

Resolution: 2.00 Å

Characteristics

Classification

Oxidoreductase

Compound

Polymer: 1 Molecule: Aldo-keto reductase family 1

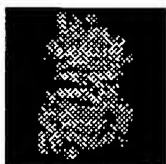
member C3 Chains: A EC no.: 1.1.1.213

1.3.1.20 1.1.1.62

Authors

Lovering, A.L., Ride, J.P., Bunce, C.M., Desmond J.C., Cummings, S.M., White, S.A.

☒ 1XU9



Crystal Structure of the Interface Closed Conformation of 11b-hydroxysteroid dehydrogenase isozyme 1

Release Date: 02-Nov-2004 Exp. Method: X Ray Diffraction

Resolution: 1.55 Å

Characteristics

Classification

Oxidoreductase

Compound

Polymer: 1 Molecule: Corticosteroid 11-beta-dehydrogenase, isozyme 1 Mutation: C272S

Chains: A,B,C,D EC no.: 1.1.1.146

Authors

Hosfield, D.J., Wu, Y., Skene, R.J., Hilger, M., Jennings, A., Snell, G.P., Aertgeerts, K.

☒ 1XU7



Crystal Structure of the Interface Open Conformation of Tetrameric 11b-HSD1

Release Date: 02-Nov-2004 Exp. Method: X Ray Diffraction

**Characteristics** Resolution: 1.80 Å**Classification** Oxidoreductase**Compound**

Polymer: 1 Molecule: Corticosteroid 11-beta-dehydrogenase, isozyme 1 Mutation: C272S

Chains: A,B,C,D EC no.: 1.1.1.146

Authors

Hosfield, D.J., Wu, Y., Skene, R.J., Hilger, M., Jennings, A., Snell, G.P., Aertgeerts, K.

☒ 2BEL**STRUCTURE OF HUMAN 11-BETA-HYDROXYSTEROID DEHYDROGENASE IN COMPLEX WITH NADP AND CARBENOXOLONE**

Release Date: 06-Dec-2004 Exp. Method: X Ray Diffraction

Resolution: 2.11 Å

Characteristics**Classification** Oxidoreductase**Compound**

Polymer: 1 Molecule: CORTICOSTEROID 11-BETA-DEHYDROGENASE ISOZYME 1 Fragment: RESIDU

26-284 Chains: A,B,C,D EC no.: 1.1.1.146

Authors

Wu, X., Kavanagh, K., Svensson, S., Elleby, B., M., Von Delft, F., Marsden, B., Jornvall, H., Abrahmsen, L., Oppermann, U.

☒ 1MRQ**Crystal structure of human 20alpha-HSD in ternary complex with NADP and 20alpha-hydroxy-progesterone**

Release Date: 30-Sep-2003 Exp. Method: X Ray Diffraction

Resolution: 1.59 Å

Characteristics**Classification** Oxidoreductase**Compound**

Polymer: 1 Molecule: Aldo-keto reductase family 1 member C1 Chains: A EC no.: 1.1.1.149

Authors

Couture, J.F., Legrand, P., Cantin, L., Luu-The, V., Labrie, F., Breton, R.

☒ 1E3S**RAT BRAIN 3-HYDROXYACYL-COA DEHYDROGENASE BINARY COMPLEX WITH NADH**

Release Date: 25-May-2001 Exp. Method: X Ray Diffraction

Resolution: 2.00 Å

Characteristics**Classification** Oxidoreductase**Compound**

Polymer: 1 Molecule: SHORT CHAIN 3-HYDROXYAC COA DEHYDROGENASE Chains: A,B,C,D EC

no.: 1.1.1.35

Authors

Powell, A.J., Read, J.A., Banfield, M.J., Gunn-Mc F., Yan, S.D., Lustbader, J., Stern, A.R., Stern, D.M., Brady, R.L.


☒ 1E3W**RAT BRAIN 3-HYDROXYACYL-COA DEHYDROGENASE BINARY COMPLEX WITH NADH AND 3-KETO BUTYRATE**


Release Date: 25-May-2001 Exp. Method: X Ray Diffraction

Resolution: 2.00 Å

Characteristics**Classification** Dehydrogenase**Compound**

Polymer: 1 Molecule: SHORT CHAIN 3-HYDROXYAC COA DEHYDROGENASE Chains: A EC no.:

Compound no.: 1.1.1.35 
 Polymer: 2 Molecule: SHORT CHAIN 3-HYDROXYACYL-COA DEHYDROGENASE Chains: B,C,D EC

Authors no.: 1.1.1.35 
 Powell, A.J., Read, J.A., Banfield, M.J., Gunn-Moore, F., Yan, S.D., Lustbader, J., Stern, A.R., Stern, D.M., Brady, R.L.

☒ 2FVL



Crystal structure of human 3-alpha hydroxysteroid/dihydrodiol dehydrogenase (AKR1C4) complexed with NADP+

Release Date: 21-Feb-2006 Exp. Method: X Ray Diffraction


Resolution: 2.40 Å


Characteristics

Classification

Oxidoreductase

Compound

Polymer: 1 Molecule: Aldo-keto reductase family 1, member C4 Chains: A,B,C EC no.: 1.1.1.225 

1.1.1.50 

Authors

Ugochukwu, E., Smee, C., Guo, K., Lukacik, P., Kavanagh, K., Debreczeni, J.E., von Delft, F., Weigelt, J., Sundstrom, M., Arrowsmith, C., Edwards, A., Oppermann, U.

☒ 1HXH



COMAMONAS TESTOSTERONI 3BETA/17BETA HYDROXYSTEROID DEHYDROGENASE

Release Date: 25-Dec-2002 Exp. Method: X Ray Diffraction

Resolution: 1.22 Å

Characteristics

Classification

Oxidoreductase

Compound

Polymer: 1 Molecule: 3BETA/17BETA-HYDROXYSTEROID DEHYDROGENASE

Chains: A,B,C,D EC no.: 1.1.1.51 

Authors

Benach, J., Filling, C., Oppermann, U.C.T., Rove P., Bricogne, G., Berndt, K.D., Jornvall, H., Ladenstein, R.

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☒ 1S1P



Crystal structures of prostaglandin D2 11-ketoreductase (AKR1C3) in complex with the non-steroidal anti-inflammatory drugs flufenamic acid and indomethacin



Characteristics

Classification

Release Date: 23-Mar-2004 Exp. Method: X Ray Diffraction

Resolution: 1.20 Å

Oxidoreductase

Compound

Polymer: 1 Molecule: Aldo-keto reductase family 1 member C3 Chains: A EC no.: 1.1.1.213 1.3.1.20 1.1.1.62

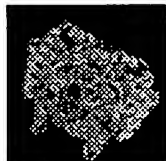
Authors

Lovering, A.L., Ride, J.P., Bunce, C.M., Desmond J.C., Cummings, S.M., White, S.A.

☒ 2HE8



Crystal structure of 17alpha-hydroxysteroid dehydrogenase in its apo-form



Characteristics

Classification

Release Date: 05-Dec-2006 Exp. Method: X Ray Diffraction

Resolution: 1.90 Å

Oxidoreductase

Compound

Polymer: 1 Molecule: Aldo-keto reductase family 1, member C21 Chains: A,B

Authors

Faucher, F., Pereira de Jesus-Tran, K., Cantin, L., Luu-The, V., Labrie, F., Breton, R.

☒ 2IRW



Human 11-beta-Hydroxysteroid Dehydrogenase (HSD1) with NADP and Adamantane Ether Inhibitor



Characteristics

Classification

Release Date: 23-Jan-2007 Exp. Method: X Ray Diffraction

Resolution: 3.10 Å

Oxidoreductase

Compound

Polymer: 1 Molecule: Corticosteroid 11-beta-dehydrogenase isozyme 1 Fragment: dehydrogenas domain (residues 25-288) Chains: A,B,C,D,E,F,G,H no.: 1.1.1.146

Authors

Patel, J.R., Shuai, Q., Dinges, J., Winn, M., Pliushchev, M., Fung, S., Monzon, K., Chiou, W., Wang, J., Pan, L., Wagaw, S., Engstrom, K., Kerdesky, F.A., Longenecker, K., Judge, R., W., Imade, H.M., Stolarik, D., Beno, D.W., Brun M., Chovan, L.E., Sham, H.L., Jacobson, P., Link J.T.

☒ 2HEJ

Crystal structure of 17alpha-hydroxysteroid dehydrogenase in complex with NADP(H) in a closed conformation

**Characteristics**

Release Date: 05-Dec-2006 Exp. Method: X Ray Diffraction

Resolution: 1.35 Å

Classification**Oxidoreductase****Compound**

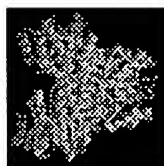
Polymer: 1 Molecule: Aldo-keto reductase family 1, member C21 Chains: A,B

Authors

Faucher, F., Pereira de Jesus-Tran, K., Cantin, L., Luu-The, V., Labrie, F., Breton, R.

☒ 1GZ6

(3R)-HYDROXYACYL-COA DEHYDROGENASE FRAGMENT OF RAT PEROXISOMAL MULTIFUNCTIONAL ENZYME TYPE 2

**Characteristics**

Release Date: 24-Jan-2003 Exp. Method: X Ray Diffraction

Resolution: 2.38 Å

Classification**Dehydrogenase****Compound**

Polymer: 1 Molecule: ESTRADIOL 17 BETA-DEHYDROGENASE 4 Fragment: (3R)-HYDROXYACOA DEHYDROGENASE FRAGMENT, RESIDUES

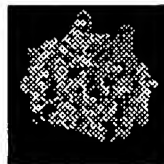
319 Chains: A,B,C,D EC no.: 1.1.1.62

Authors

Haapalainen, A.M., Koski, M.K., Qin, Y.M., Hiltunen, J.K., Glumoff, T.

☒ 2HE5

Crystal structure of 17alpha-hydroxysteroid dehydrogenase in binary complex with NADP (H) in an open conformation

**Characteristics**

Release Date: 05-Dec-2006 Exp. Method: X Ray Diffraction

Resolution: 2.90 Å

Classification**Oxidoreductase****Compound**

Polymer: 1 Molecule: Aldo-keto reductase family 1, member C21 Chains: A,B,C,D

Authors

Faucher, F., Pereira de Jesus-Tran, K., Cantin, L., Luu-The, V., Labrie, F., Breton, R.

☒ 1NFF

Crystal structure of Rv2002 gene product from Mycobacterium tuberculosis

**Characteristics**

Release Date: 30-Dec-2002 Exp. Method: X Ray Diffraction

Resolution: 1.80 Å

Classification**Oxidoreductase****Compound**

Polymer: 1 Molecule: Putative oxidoreductase Rv200: Mutation: I6T, V47M, T69K Chains: A,B EC

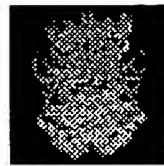
no.: 1.1.1.53

Authors

Yang, J.K., Park, M.S., Waldo, G.S., Suh, S.W.

☒ 1NFQ

Rv2002 gene product from Mycobacterium tuberculosis


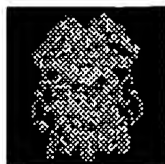

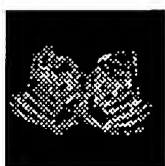

**Characteristics**

Release Date: 30-Dec-2002 Exp. Method: X Ray Diffraction

Resolution: 2.40 Å

Classification**Oxidoreductase****Compound**

Polymer: 1 Molecule: Putative oxidoreductase Rv200: Mutation: I6T, V47M, T69K Chains: A,B,C,D EC

no.: 1.1.1.53 **Authors****Yang, J.K., Park, M.S., Waldo, G.S., Suh, S.W.**☒ **1NFR****Characteristics****Rv2002 gene product from Mycobacterium tuberculosis****Release Date:** 30-Dec-2002 **Exp. Method:** X Ray Diffraction**Resolution:** 2.10 Å**Classification****Oxidoreductase****Compound**Polymer: 1 Molecule: Putative oxidoreductase Rv200;
Mutation: I6T, V47(MSE), T69K Chains: A,B,C,D ECno.: 1.1.1.53 **Authors****Yang, J.K., Park, M.S., Waldo, G.S., Suh, S.W.**☒ **1S9C****Characteristics****Crystal structure analysis of the 2-enoyl-CoA hydratase 2 domain of human peroxisomal multifunctional enzyme type 2****Release Date:** 15-Feb-2005 **Exp. Method:** X Ray Diffraction**Resolution:** 3.00 Å**Classification****Lyase****Compound**Polymer: 1 Molecule: Peroxisomal multifunctional enz
type 2 Fragment: 2-enoyl-coenzyme A hydratase 2
domain Mutation: S318M, T319A, I559V, T615L
Chains: A,B,C,D,E,F,G,H,I,J,K,L EC no.: 4.2.1.-**Authors****Koski, M.K., Haapalainen, A.M., Hiltunen, J.K.** 1 2 3 4 5 6

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RESUMED UPDATING

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Data Report (F452), Prous Science Drugs of the Future (F453),
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? s (hydroxysteroid dehydrogenase) and (crystal or crystalline or crystallization or co-crystal or co-crystallization)

2305 HYDROXYSTEROID DEHYDROGENASE
2448636 CRYSTAL
551751 CRYSTALLINE
564845 CRYSTALLIZATION
101 CO-CRYSTAL

156 CO-CRYSTALLIZATION

S1 63 S (HYDROXYSTEROID DEHYDROGENASE) AND (CRYSTAL OR CRYSTALLINE OR CRYSTALLIZATION OR CO-CRYSTAL OR CO-CRYSTALLIZATION)

? S (HYDROXYSTEROID DEHYDROGENASE) AND (CRYSTAL OR CRYSTALLINE OR CRYSTALLI?ATION OR CO-CRYSTAL OR CO-CRYSTALLI?ATION)

2305 HYDROXYSTEROID DEHYDROGENASE
2448636 CRYSTAL
551751 CRYSTALLINE
572563 CRYSTALLI?ATION
101 CO-CRYSTAL
168 CO-CRYSTALLI?ATION

S2 63 S (HYDROXYSTEROID DEHYDROGENASE) AND (CRYSTAL OR CRYSTALLINE OR CRYSTALLI?ATION OR CO-CRYSTAL OR CO-CRYSTALLI?ATION)

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18887445 Biosis No.: 200600232840

Bile salt biotransformations by human intestinal bacteria

2006

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12944008 Biosis No.: 199598411841

Synthesis of (17R)- and (17S)-17-hydroxy-14, 15-secoandrost-4-en-15-yn-3-one and the X-ray crystal structure of the (17S)-diastereomer

1995

3/8/3 (Item 3 from file: 5)

12761848 Biosis No.: 199598229681

Synthesis of (17R)- and (17S)-17-hydroxy-14, 15-secoandrost-4-en-16-yn-3-one and the X-ray crystal structure of the (17S)-diastereomer

1995

3/8/4 (Item 4 from file: 5)

11428502 Biosis No.: 199294130343

INHIBITION OF STREPTOMYCES-HYDROGENANS 3-ALPHA 20-BETA HYDROXYSTEROID DEHYDROGENASE BY LICORICE-DERIVED COMPOUNDS AND CRYSTALLIZATION OF AN ENZYME-COFACTOR-INHIBITOR COMPLEX

1992

3/8/5 (Item 5 from file: 5)

07132040 Biosis No.: 198427047459

CRYSTALLIZATION AND PRELIMINARY CRYSTALLOGRAPHIC STUDY OF 3-ALPHA 20-BETA HYDROXY STEROID DEHYDROGENASE FROM STREPTOMYCES-HYDROGENANS

1984

3/8/6 (Item 1 from file: 34)

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15562483 Genuine Article#: 086CK Number of References: 36

Role of glutamine 148 of human 15-hydroxyprostaglandin dehydrogenase in catalytic oxidation of prostaglandin E-2

(ABSTRACT AVAILABLE)

Publication date: 20061001

Journal Subject Category: BIOCHEMISTRY & MOLECULAR BIOLOGY; CHEMISTRY, MEDICINAL; CHEMISTRY, ORGANIC

Descriptors--Author Keywords: prostaglandins ; 15-hydroxyprostaglandin dehydrogenase ; molecular modeling ; site-directed mutagenesis

Identifiers-- KeyWord Plus(R): SITE-DIRECTED MUTAGENESIS; DROSOPHILA ALCOHOL-DEHYDROGENASE; SHORT-CHAIN DEHYDROGENASES; CRYSTAL -STRUCTURE; ESCHERICHIA-COLI; 3-ALPHA,20-BETA-HYDROXYSTEROID DEHYDROGENASE; **HYDROXYSTEROID DEHYDROGENASE**; COENZYME SPECIFICITY; ANGSTROM RESOLUTION; CARBONYL REDUCTASE

3/8/7 (Item 2 from file: 34)

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15063260 **Genuine Article#:** 031FY **Number of References:** 11

Benzothiazole derivatives as novel inhibitors of human 11 beta-hydroxysteroid dehydrogenase type 1
(ABSTRACT AVAILABLE)

Publication date: 20060327

Journal Subject Category: CELL BIOLOGY; ENDOCRINOLOGY & METABOLISM

Descriptors--Author Keywords: **hydroxysteroid dehydrogenase** ; 11 beta-HSD1 ; inhibitors ; benzothiazole ; diabetes ; obesity

Identifiers-- KeyWord Plus(R): TISSUE

3/8/8 (Item 3 from file: 34)

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14008136 **Genuine Article#:** 931PS **Number of References:** 48

Comparison of crystal structures of human type 3 3 alpha-hydroxysteroid dehydrogenase reveals an "induced-fit" mechanism and a conserved basic motif involved in the binding of androgen
(ABSTRACT AVAILABLE)

Publication date: 20050600

Journal Subject Category: BIOCHEMISTRY & MOLECULAR BIOLOGY

Descriptors--Author Keywords: aldo-keto reductase ; **hydroxysteroid dehydrogenase** ; crystal structure ; induced-fit mechanism

Identifiers-- KeyWord Plus(R): ALDO-KETO REDUCTASE; SITE-DIRECTED MUTAGENESIS; DIHYDRODIOL DEHYDROGENASE; 20-ALPHA-HYDROXYSTEROID DEHYDROGENASE; ALDEHYDE REDUCTASE; MACROMOLECULAR STRUCTURES; TISSUE DISTRIBUTION; YEAST HEXOKINASE; SUBSTRATE; SUPERFAMILY

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13908152 **Genuine Article#:** 924EU **Number of References:** 30

Crystal structure of murine 11 beta-hydroxysteroid dehydrogenase 1: An important therapeutic target for diabetes

(ABSTRACT AVAILABLE)

Publication date: 20050510

Journal Subject Category: BIOCHEMISTRY & MOLECULAR BIOLOGY

Identifiers-- KeyWord Plus(R): HEPATIC INSULIN SENSITIVITY; DEHYDROGENASE TYPE-1; **HYDROXYSTEROID DEHYDROGENASE**; ANGSTROM RESOLUTION; REDUCTASE; MICE; CRYSTALLOGRAPHY; ORIENTATION; ACTIVATION; COMPLEXES

3/8/10 (Item 5 from file: 34)

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13578997 **Genuine Article#:** 897DJ **Number of References:** 35

The crystal structure of guinea pig 11 beta-hydroxysteroid dehydrogenase type 1 provides a model for enzyme-lipid bilayer interactions

(ABSTRACT AVAILABLE)

Publication date: 20050204

Journal Subject Category: BIOCHEMISTRY & MOLECULAR BIOLOGY

Identifiers-- KeyWord Plus(R): SHORT-CHAIN DEHYDROGENASES/REDUCTASES; **HYDROXYSTEROID DEHYDROGENASE**; MACROMOLECULAR STRUCTURES; ALCOHOL-DEHYDROGENASE; ANGSTROM RESOLUTION; RECOGNITION; REFINEMENT; SDR

3/8/11 (Item 6 from file: 34)

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13269418 **Genuine Article#:** 863WX **Number of References:** 31

Site-directed mutagenesis to enable and improve crystallizability of Candida tropicalis (3R)-hydroxyacyl-CoA dehydrogenase

(ABSTRACT AVAILABLE)

Publication date: 20041105

Journal Subject Category: BIOCHEMISTRY & MOLECULAR BIOLOGY; BIOPHYSICS

Descriptors-- Author Keywords: 17 beta-HSD ; MFE-2 ; beta-oxidation ; peroxisome ; SDR

Identifiers-- KeyWord Plus(R): PEROXISOMAL MULTIFUNCTIONAL ENZYME; BIFUNCTIONAL PROTEIN-DEFICIENCY; BETA-OXIDATION; RAT-LIVER; **CRYSTAL-STRUCTURE**; **HYDROXYSTEROID DEHYDROGENASE**; RESOLUTION; FAMILY; ACID; SDR

3/8/12 (Item 7 from file: 34)

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13199617 **Genuine Article#:** 857RH **Number of References:** 49

Structural insights into the neuroprotective-acting carbonyl reductase Sniffer of Drosophila melanogaster

(ABSTRACT AVAILABLE)

Publication date: 20041001

Journal Subject Category: BIOCHEMISTRY & MOLECULAR BIOLOGY

Descriptors-- Author Keywords: Sniffer ; carbonyl reductase ; X-ray crystal structure ; NADP(+) ; MAD

Identifiers-- KeyWord Plus(R): CHAIN DEHYDROGENASE/REDUCTASE FAMILY; MOLECULAR REPLACEMENT; **CRYSTAL-STRUCTURE**; OXIDATIVE STRESS; ANGSTROM RESOLUTION; 17-BETA-HYDROXYSTEROID DEHYDROGENASE; **HYDROXYSTEROID DEHYDROGENASE**; ALCOHOL-

DEHYDROGENASE; ESCHERICHIA-COLI; PROTEIN MODELS

3/8/13 (Item 8 from file: 34)

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13159147 **Genuine Article#:** 853OX **Number of References:** 41

Crystal structure of human ABAD/HSD10 with a bound inhibitor: Implications for design of Alzheimer's disease therapeutics

(ABSTRACT AVAILABLE)

Publication date: 20040917

Journal Subject Category: BIOCHEMISTRY & MOLECULAR BIOLOGY

Descriptors--Author Keywords: ABAD ; HSD10 ; Alzheimer's disease ; short-chain dehydrogenase

Identifiers-- KeyWord Plus(R): AMYLOID PRECURSOR PROTEIN; COENZYME-A DEHYDROGENASE; ALCOHOL-DEHYDROGENASE; ANGSTROM RESOLUTION; ESCHERICHIA-COLI; BETA-PEPTIDE; 3-HYDROXYACYL-COA DEHYDROGENASE; **HYDROXYSTEROID DEHYDROGENASE**; ENZYMATIC AMPLIFICATION; SINGLE-DOMAIN

3/8/14 (Item 9 from file: 34)

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12638514 **Genuine Article#:** 806FF **Number of References:** 46

Structure-function of human 3 alpha-hydroxysteroid dehydrogenases: genes and proteins

(ABSTRACT AVAILABLE)

Publication date: 20040227

Journal Subject Category: CELL BIOLOGY; ENDOCRINOLOGY & METABOLISM

Descriptors--Author Keywords: 3 alpha-hydroxysteroid dehydrogenase (HSD) ; aldo-keto reductase (AKR) ; estrogen receptor

Identifiers-- KeyWord Plus(R): ALDO-KETO REDUCTASE; HUMAN DIHYDRODIOL DEHYDROGENASE; ACID-BINDING PROTEIN; HUMAN LIVER; **HYDROXYSTEROID DEHYDROGENASE**; CHLORDECONE REDUCTASE; ANDROGEN METABOLISM; TISSUE DISTRIBUTION; MOLECULAR-CLONING; **CRYSTAL-STRUCTURE**

3/8/15 (Item 10 from file: 34)

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11820071 **Genuine Article#:** 698CH **Number of References:** 104

Hydroxysteroid dehydrogenases and pre-receptor regulation of steroid hormone action

(ABSTRACT AVAILABLE)

Publication date: 20030500

Journal Subject Category: OBSTETRICS & GYNECOLOGY; REPRODUCTIVE BIOLOGY

Descriptors--Author Keywords: aldo-keto reductase ; **hydroxysteroid dehydrogenase** ; short-chain dehydrogenase or reductase ; steroid receptor

Identifiers-- KeyWord Plus(R): HUMAN 17-BETA-HYDROXYSTEROID DEHYDROGENASE; APPARENT MINERALOCORTICOID EXCESS; KETO REDUCTASE SUPERFAMILY; ACID-BINDING PROTEIN;

HUMAN BREAST-CARCINOMA; 11-BETA-HYDROXYSTEROID DEHYDROGENASE; 3-ALPHA-HYDROXYSTEROID DEHYDROGENASE; ESTROGEN-RECEPTOR; TYPE-5 17-BETA-HYDROXYSTEROID-DEHYDROGENASE; PROSTATE-CANCER

3/8/16 (Item 11 from file: 34)

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11465693 **Genuine Article#:** 655KP **Number of References:** 28

Examination of the differences in structure-function of human and rat 3 alpha-hydroxysteroid dehydrogenase (ABSTRACT AVAILABLE)

Publication date: 20030201

Journal Subject Category: BIOCHEMISTRY & MOLECULAR BIOLOGY; PHARMACOLOGY & PHARMACY; TOXICOLOGY

Descriptors--Author Keywords: hydroxysteroid dehydrogenase ; aldo-keto reductase ; bile acids ; ursodeoxycholate ; testosterone

Identifiers-- KeyWord Plus(R): KETO REDUCTASE SUPERFAMILY; ACID-BINDING PROTEIN; LIVER DIHYDRODIOL DEHYDROGENASES; TISSUE DISTRIBUTION; KINETIC MECHANISM; MOLECULAR-CLONING; CRYSTAL-STRUCTURE; ALDOSE REDUCTASE; MUTAGENESIS; EXPRESSION

3/8/17 (Item 12 from file: 34)

SciSearch(R) Cited Ref Sci

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11465678 **Genuine Article#:** 655KP **Number of References:** 34

Short-chain dehydrogenases/reductases (SDR): the 2002 update (ABSTRACT AVAILABLE)

Publication date: 20030201

Journal Subject Category: BIOCHEMISTRY & MOLECULAR BIOLOGY; PHARMACOLOGY & PHARMACY; TOXICOLOGY

Descriptors--Author Keywords: short-chain dehydrogenases/reductases ; structure-function relationships ; hydroxysteroid dehydrogenase ; reaction mechanism ; metabolic disease

Identifiers-- KeyWord Plus(R): MAGNAPORTHE-GRISEA; CRYSTAL-STRUCTURE; ACTIVE-SITE; TRIHYDROXYNAPHTHALENE REDUCTASE; ALCOHOL-DEHYDROGENASE; TERNARY COMPLEX; LIVER ALCOHOL; MECHANISM; TYPE-1; 17-BETA-HYDROXYSTEROID-DEHYDROGENASE

3/8/18 (Item 13 from file: 34)

SciSearch(R) Cited Ref Sci

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10248748 **Genuine Article#:** 502GN **Number of References:** 31

Meta-cleavage enzyme gene tesB is necessary for testosterone degradation in Comamonas testosteroni TA441 (ABSTRACT AVAILABLE)

Publication date: 20011200

Journal Subject Category: MICROBIOLOGY

Descriptors-- Author Keywords: biodegradation ; steroid hormone ; seco-steroid

Identifiers-- KeyWord Plus(R): PSEUDOMONAS-TESTOSTERONI; DELTA-5-3-KETOSTEROID ISOMERASE; **HYDROXYSTEROID DEHYDROGENASE**; ACIDAMINOCOCCUS-FERMENTANS; EXTRADIOL DIOXYGENASE; BIPHENYL DEGRADATION; NUCLEOTIDE-SEQUENCE; MOLECULAR-CLONING; **CRYSTAL-STRUCTURE**; ESCHERICHIA-COLI

3/8/19 (Item 14 from file: 34)

SciSearch(R) Cited Ref Sci

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09516805 **Genuine Article#:** 415FT **Number of References:** 43

17 beta-hydroxysteroid dehydrogenase from the fungus Cochliobolus lunatus: structural and functional aspects

(ABSTRACT AVAILABLE)

Publication date: 20010130

Journal Subject Category: BIOCHEMISTRY & MOLECULAR BIOLOGY; BIOLOGY; CHEMISTRY, MEDICINAL; CHEMISTRY, MULTIDISCIPLINARY; PHARMACOLOGY & PHARMACY; TOXICOLOGY

Descriptors-- Author Keywords: 17 beta-hydroxysteroid dehydrogenase ; short chain dehydrogenases/reductases ; fungi ; Cochliobolus lunatus

Identifiers-- KeyWord Plus(R): **CRYSTAL-STRUCTURE**; MULTIFUNCTIONAL ENZYME; ESCHERICHIA-COLI; **HYDROXYSTEROID DEHYDROGENASE**; SCHIZOSACCHAROMYCES-POMBE; ALCOHOL-DEHYDROGENASE; MAGNAPORTHE-GRISEA; TERNARY COMPLEX; HORMONE ACTION; REDUCTASE

3/8/20 (Item 15 from file: 34)

SciSearch(R) Cited Ref Sci

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09516798 **Genuine Article#:** 415FT **Number of References:** 44

3 alpha-hydroxysteroid dehydrogenase/carbonyl reductase from Comamonas testosteroni: biological significance, three-dimensional structure and gene regulation

(ABSTRACT AVAILABLE)

Publication date: 20010130

Journal Subject Category: BIOCHEMISTRY & MOLECULAR BIOLOGY; BIOLOGY; CHEMISTRY, MEDICINAL; CHEMISTRY, MULTIDISCIPLINARY; PHARMACOLOGY & PHARMACY; TOXICOLOGY

Descriptors-- Author Keywords: carbonyl reductase ; Comamonas testosteroni ; crystal structure ; 3-alpha-hydroxysteroid dehydrogenase ; transcriptional regulation

Identifiers-- KeyWord Plus(R): SHORT-CHAIN DEHYDROGENASES; LUNG CARBONYL REDUCTASE; PSEUDOMONAS-TESTOSTERONI; ESCHERICHIA-COLI; 3-ALPHA,20-BETA-HYDROXYSTEROID DEHYDROGENASE; **HYDROXYSTEROID DEHYDROGENASE**; 3-DIMENSIONAL STRUCTURE; COENZYME SPECIFICITY; MOLECULAR-CLONING; **CRYSTAL -STRUCTURE**

3/8/21 (Item 16 from file: 34)

SciSearch(R) Cited Ref Sci

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08632739 **Genuine Article#:** 310FX **Number of References:** 61

Molecular and structural aspects of xenobiotic carbonyl metabolizing enzymes. Role of reductases and dehydrogenases in xenobiotic phase I reactions

(ABSTRACT AVAILABLE)

Publication date: 20000403

Journal Subject Category: TOXICOLOGY; PHARMACOLOGY & PHARMACY

Descriptors--Author Keywords: xenobiotic carbonyl metabolism ; alcohol dehydrogenase ; aldehyde dehydrogenase ; carbonyl reduction ; quinone reductase ; **hydroxysteroid dehydrogenase** ; aldo-keto reductases ; short-chain dehydrogenases/reductases

Identifiers-- Key Word Plus(R): ALDO-KETO REDUCTASE; MITOCHONDRIAL ALDEHYDE DEHYDROGENASE; SHORT-CHAIN DEHYDROGENASE/REDUCTASE; 3-DIMENSIONAL STRUCTURE; ALCOHOL-DEHYDROGENASE; DIHYDRODIOL DEHYDROGENASE; ANGSTROM RESOLUTION; CRYSTAL-STRUCTURE; 11-BETA-HYDROXYSTEROID DEHYDROGENASE; HYDROXYSTEROID DEHYDROGENASES

3/8/22 (Item 17 from file: 34)

SciSearch(R) Cited Ref Sci

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07829664 **Genuine Article#:** 212BN **Number of References:** 59

Molecular determinants of steroid recognition and catalysis in aldo-keto reductases. Lessons from 3 alpha-hydroxysteroid dehydrogenase

(ABSTRACT AVAILABLE)

Publication date: 19990400

Journal Subject Category: BIOCHEMISTRY & MOLECULAR BIOLOGY; ENDOCRINOLOGY & METABOLISM

Identifiers-- Key Word Plus(R): DIHYDRODIOL DEHYDROGENASE; 20-ALPHA-HYDROXYSTEROID DEHYDROGENASE; 17-BETA-HYDROXYSTEROID DEHYDROGENASES; **HYDROXYSTEROID DEHYDROGENASE**; SUBSTRATE-SPECIFICITY; CRYSTAL-STRUCTURE; HORMONE ACTION; HUMAN PROSTATE; DOG PROSTATE; GENE FAMILY

3/8/23 (Item 18 from file: 34)

SciSearch(R) Cited Ref Sci

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05479933 **Genuine Article#:** WB623 **Number of References:** 35

ACTIVE-SITE-DIRECTED MUTAGENESIS OF 3-BETA/17-BETA-HYDROXYSTEROID DEHYDROGENASE ESTABLISHES DIFFERENTIAL-EFFECTS ON SHORT-CHAIN DEHYDROGENASE/REDUCTASE REACTIONS

(Abstract Available)

Journal Subject Category: BIOCHEMISTRY & MOLECULAR BIOLOGY

Identifiers-- Key Words Plus: DROSOPHILA ALCOHOL-DEHYDROGENASE; PSEUDOMONAS-TESTOSTERONI; 15-HYDROXYPROSTAGLANDIN DEHYDROGENASE; 3-ALPHA,20-BETA-HYDROXYSTEROID DEHYDROGENASE; **HYDROXYSTEROID DEHYDROGENASE**; 3-DIMENSIONAL STRUCTURE; HUMAN ALDEHYDE; REDUCTASE; SUPERFAMILY; EXPRESSION

Research Fronts: 95-0536 002 (11-BETA-HYDROXYSTEROID DEHYDROGENASE; FETAL ORIGINS OF CORONARY HEART-DISEASE; APPARENT MINERALOCORTICOID EXCESS SYNDROMES)

95-3190 001 (INCREASED ABUNDANCE OF SPECIFIC SKELETAL-MUSCLE PROTEIN-TYROSINE PHOSPHATASES; ALPHA-B-CRYSTALLIN EXPRESSION)

95-8203 001 (PROTEIN STABILITY; EQUILIBRIUM DENATURATION; TRYPTOPHAN-CONTAINING ALPHA-SUBUNITS OF THE ESCHERICHIA-COLI TRYPTOPHAN SYNTHASE; UNFOLDING THERMODYNAMICS)

3/8/24 (Item 19 from file: 34)

SciSearch(R) Cited Ref Sci

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02060206 **Genuine Article#:** JX778 **Number of References:** 27

RAPID PURIFICATION YIELDING HIGHLY-ACTIVE 17-BETA-HYDROXYSTEROID DEHYDROGENASE - APPLICATION OF HYDROPHOBIC INTERACTION AND AFFINITY FAST PROTEIN LIQUID-CHROMATOGRAPHY

(Abstract Available)

Journal Subject Category: CHEMISTRY, ANALYTICAL

Identifiers-- Key Words Plus: TRANSFER RNA-SYNTHETASE; **HYDROXYSTEROID DEHYDROGENASE;** ESCHERICHIA-COLI; **CRYSTALLIZATION**

Research Fronts: 90-3110 001 (IDENTIFICATION OF FRAGMENTS; CORTICOSTEROIDS INCREASE LIPOCORTIN-I; RAS ADENYLATE-CYCLASE PATHWAY; HEAT-SHOCK PROTEIN HSP70 FAMILY)

90-3605 001 (METASTATIC PROSTATE-CANCER; ANTIANDROGEN FLUTAMIDE; LUTEINIZING-HORMONE-RELEASING HORMONE AGONIST THERAPY; PHASE-II MULTICENTER TRIAL; THERAPEUTIC OPTIONS)

3/8/25 (Item 1 from file: 73)

14275389 **EMBASE No:** 2007038012

Discovery of adamantane ethers as inhibitors of 11beta-HSD-1: Synthesis and biological evaluation

Publication Date: 01 FEB 2007

3/8/26 (Item 2 from file: 73)

13679174 **EMBASE No:** 2003089936

The aldo-keto reductase superfamily homepage

Publication Date: 01 FEB 2003

3/8/27 (Item 3 from file: 73)

13136544 **EMBASE No:** 2005183902

Novel and potent 17beta-hydroxysteroid dehydrogenase type 1 inhibitors

Publication Date: 21 APR 2005

3/8/28 (Item 4 from file: 73)

12620034 **EMBASE No:** 2004212254

Alanine Scanning Mutagenesis of the Testosterone Binding Site of Rat 3alpha-Hydroxysteroid Dehydrogenase Demonstrates Contact Residues Influence the Rate-Determining Step

Publication Date: 18 MAY 2004

3/8/29 (Item 5 from file: 73)

12540423 **EMBASE No:** 2004135555

Human cytosolic 3alpha-hydroxysteroid dehydrogenases of the aldo-keto reductase superfamily display significant 3beta-hydroxysteroid dehydrogenase activity: Implications for steroid hormone metabolism and action

Publication Date: 12 MAR 2004

3/8/30 (Item 6 from file: 73)

12112040 **EMBASE No:** 2003223599

The structural revolution

Publication Date: 01 MAY 2003

3/8/31 (Item 7 from file: 73)

11940575 **EMBASE No:** 2003047104

Directed evolution approach to a structural genomics project: Rv2002 from Mycobacterium tuberculosis

Publication Date: 21 JAN 2003

3/8/32 (Item 8 from file: 73)

11294113 **EMBASE No:** 2001306196

Crystal structure of human type III 3alpha-hydroxysteroid dehydrogenase/bile acid binding protein complexed with NADPSUP⁺ and ursodeoxycholate

Publication Date: 28 AUG 2001

3/8/33 (Item 9 from file: 73)

11044901 EMBASE No: 2000386862

Recognition of structurally diverse substrates by type II 3-hydroxyacyl-CoA dehydrogenase (HADH II)/amyloid-beta binding alcohol dehydrogenase (ABAD)

Publication Date: 20 OCT 2000

3/8/34 (Item 10 from file: 73)

07424826 EMBASE No: 1998335253

Roles of the Ser146, Tyr159, and Lys163 residues in the catalytic action of 7alpha-hydroxysteroid dehydrogenase from Escherichia coli

Publication Date: 1998

3/8/35 (Item 11 from file: 73)

06804796 EMBASE No: 1997087281

Hydroxysteroid dehydrogenases: New drug targets of the aldo-keto reductase superfamily

Publication Date: 1997

3/8/36 (Item 12 from file: 73)

06765152 EMBASE No: 1997046644

The key role of 17beta-hydroxysteroid dehydrogenases in sex steroid biology

Publication Date: 1997

3/8/37 (Item 13 from file: 73)

06543029 EMBASE No: 1996193969

Crystal structures of the binary and ternary complexes of 7alpha- hydroxysteroid dehydrogenase from Escherichia coli

Publication Date: 1996

3/8/38 (Item 14 from file: 73)

06415889 EMBASE No: 1996079264

Crystallization and crystal packing of recombinant 3 (or 17) beta-hydroxysteroid dehydrogenase from *Comamonas testosteroni* ATTC 11996

Publication Date: 1996

3/8/39 (Item 15 from file: 73)

06013797 EMBASE No: 1995042602

Human 17beta-hydroxysteroid dehydrogenase: Optical properties of its complex with NADPsup +

Publication Date: 1995

3/8/40 (Item 16 from file: 73)

05873176 EMBASE No: 1994283158

Secosteroid mechanism-based inactivators and site-directed mutagenesis as probes for steroid hormone recognition by 3alpha-hydroxysteroid dehydrogenase

Publication Date: 1994

3/8/41 (Item 17 from file: 73)

02592592 EMBASE No: 1984211550

Crystallization and preliminary crystallographic investigation of 3alpha,20beta-hydroxysteroid dehydrogenase from *Streptomyces hydrogenans*

Publication Date: 1984

3/8/42 (Item 18 from file: 73)

02202897 EMBASE No: 1982120058

Androstenedione metabolism by human lymphocytes

Publication Date: 1982

3/8/43 (Item 19 from file: 73)

01927723 EMBASE No: 1981106890

Sertoli cell capacity to metabolize progesterone: Variation with age and the effect of follicle-stimulating hormone

Publication Date: 1981

3/8/44 (Item 20 from file: 73)

01738222 EMBASE No: 1980043973

Metabolism of C₁₉-radiosteroids by explants of canine prostate and epididymis with disposition as hydroxylated products: A possible mechanism for androgen inactivation

Publication Date: 1979

3/8/45 (Item 21 from file: 73)

00304769 EMBASE No: 1975077095

Properties of crystalline 3 β hydroxysteroid oxidase of *Brevibacterium sterolicum*

Publication Date: 1974

3/8/46 (Item 22 from file: 73)

00153764 EMBASE No: 1974143883

Isolation and crystallization of extracellular 3 β hydroxysteroid oxidase of *Brevibacterium sterolicum* nov. sp.

Publication Date: 1973

3/8/47 (Item 1 from file: 98)

General Sci Abs

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5753134 H.w. Wilson Record Number: BGSA05225461

Crystal Structure of Murine 11 β -Hydroxysteroid Dehydrogenase 1: An Important Therapeutic Target for Diabetes

Descriptors:

Hydroxysteroid dehydrogenase--Crystallography

May 10 2005 (20050510)

3/8/48 (Item 2 from file: 98)

General Sci Abs

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04672023 H.w. Wilson Record Number: BGSA01172023

Crystal structure of human type III 3 α -hydroxysteroid dehydrogenase/bile acid binding protein complexed with NADP⁺ and ursodeoxycholate.

Descriptors:

Protein binding; **Hydroxysteroid dehydrogenase**; Binding sites (Biochemistry); Bile acids and salts;

Dehydrogenases--Crystallography

Aug. 28 2001 (20010828)

3/8/49 (Item 3 from file: 98)

General Sci Abs

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04015049 H.w. Wilson Record Number: BGSA99015049

Structure of the ternary complex of human 17 β -hydroxysteroid dehydrogenase type 1 with 3-hydroxyestra-1,3,5,7-tetraen-17-one (equilin) and NADP⁺.

Descriptors:

Hydroxysteroid dehydrogenase; Estrogens--Therapeutic uses

Feb. 2 1999 (19990202)

3/8/50 (Item 4 from file: 98)

General Sci Abs

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03285913 H.w. Wilson Record Number: BGSA96035913

Structure of 3 α -hydroxysteroid/dihydrodiol dehydrogenase complexed with NADP⁺.

Descriptors:

Liver--Enzymes; Nicotinamide nucleotides; **Hydroxysteroid dehydrogenase**; Dehydrogenases--Crystallography;

Binding sites (Biochemistry)

Aug. 20 1996 (19960820)

3/8/51 (Item 5 from file: 98)

General Sci Abs

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03276873 H.w. Wilson Record Number: BGSA96026873

Crystal structures of the binary and ternary complexes of 7 α -hydroxysteroid dehydrogenase from *Escherichia coli*.

Descriptors:

Dehydrogenases--Crystallography; **Hydroxysteroid dehydrogenase**
June 18 1996 (19960618)

3/8/52 (Item 6 from file: 98)

General Sci Abs

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02785716 **H.w. Wilson Record Number:** BGSA94035716

Secosteroid mechanism-based inactivators and site-directed mutagenesis as probes for steroid hormone recognition by 3 α -hydroxysteroid dehydrogenase.

Descriptors:

Metabolic inhibitors--Enzymes; Molecular recognition; Molecules--Models; **Hydroxysteroid dehydrogenase**
Aug. 30 1994 (19940830)

3/8/53 (Item 1 from file: 266)

FEDRIP

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00586478

Identifying No.: 5R01DK047015-13 **Agency Code:** CRISP

Structure/Function of Steroid Hormone Transforming AKRs

Descriptors: testosterone; chemical kinetics; stereochemistry; polymerase chain reaction ; fluorescence spectrometry; X ray crystallography; cofactor; steroid hormone; enzyme mechanism; enzyme structure; enzyme substrate complex; isozyme; site directed mutagenesis; point mutation; aldehyde reductase; **hydroxysteroid dehydrogenase**; **crystallization**; stop flow technique; protein structure function; chimeric protein; synthetic protein; nicotinamide adenine dinucleotide; NAD(H) phosphate; active site

? t s3/full/47 25 10 9

3/9/47 (Item 1 from file: 98)

General Sci Abs

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5753134 **H.w. Wilson Record Number:** BGSA05225461

Crystal Structure of Murine 11 β -Hydroxysteroid Dehydrogenase 1: An Important Therapeutic Target for Diabetes

Zhang, Jiandong

Osslund, Timothy D; Plant, Matthew H

Biochemistry (American Chemical Society) v. 44 no18 (May 10 2005) p. 6948-57

Document Type: Feature Article

ISSN: 0006-2960

Language: English

Country Of Publication: United States

Record Type: Citation **Record Status:** Corrected or revised record

Descriptors:

Hydroxysteroid dehydrogenase--Crystallography

3/9/25 (Item 1 from file: 73)

Fulltext available through: [ScienceDirect \(Elsevier\)](#) [USPTO Full Text Retrieval Options](#)

EMBASE

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14275389 **EMBASE No:** 2007038012

Discovery of adamantane ethers as inhibitors of 11beta-HSD-1: Synthesis and biological evaluation

Patel J.R.; Shuai Q.; Dinges J.; Winn M.; Pliushchev M.; Fung S.; Monzon K. ; Chiou W.; Wang J.; Pan L.; Wagaw S.; Engstrom K.; Kerdesky F.A.; Longenecker K.; Judge R.; Qin W.; Imade H.M.; Stolarik D.; Beno D.W.A.; Brune M.; Chovan L.E.; Sham H.L.; Jacobson P.; Link J.T.

J.R. Patel, Global Pharmaceutical Research and Development, Abbott Laboratories, R43G, 200 Abbott Park Road, Abbott Park, IL 60064-6217 United States

Author Email: jyoti.patel@abbott.com

Bioorganic and Medicinal Chemistry Letters (BIOORG. MED. CHEM. LETT.) (United Kingdom) 01 FEB 2007 , 17/3 (750-755)

CODEN: BMCLE **ISSN:** 0960-894X

Publisher Item Identifier: S0960894X06012583

Document Type: Journal ; Article

Language: ENGLISH **Summary Language:** ENGLISH

Number Of References: 23

A novel class of adamantane ethers 11beta-hydroxysteroid hydrogenase type I inhibitors has been discovered. These compounds have excellent HSD-1 potency and selectivity against HSD-2. The structure-activity relationships, selectivity, metabolism, PK, ex vivo pharmacodynamic data, and an X-ray **crystal** structure of one of these inhibitors bound to h-HSD-1 are discussed. (c) 2006 Elsevier Ltd. All rights reserved.

DRUG DESCRIPTORS:

* 11beta hydroxysteroid dehydrogenase; *adamantane derivative--drug analysis --an; *adamantane derivative--drug development--dv; *adamantane derivative --intravenous drug administration--iv; *adamantane derivative--oral drug administration--po; *adamantane derivative--pharmacokinetics--pk; * adamantane derivative--pharmacology--pd; *ether derivative--drug analysis --an; *ether derivative--drug development--dv; *ether derivative --intravenous drug administration--iv; *ether derivative--oral drug administration--po; *ether derivative--pharmacokinetics--pk; *ether derivative--pharmacology--pd; *oxidoreductase inhibitor

hydroxysteroid dehydrogenase

MEDICAL DESCRIPTORS:

IC 50; X ray crystallography; animal tissue; article; biological activity; controlled study; **crystal** structure; drug bioavailability; drug clearance; drug half life; drug metabolism; drug potency; drug selectivity; drug synthesis; ex vivo study; human; mouse; nonhuman; pharmacodynamics; single drug dose; structure activity relation

CAS Registry Number: 9041-46-7 (11beta hydroxysteroid dehydrogenase); 9001-56-3 (**hydroxysteroid dehydrogenase**)

SECTION HEADINGS:

030 Clinical and Experimental Pharmacology

037 Drug Literature Index

3/9/10 (Item 5 from file: 34)

Fulltext available through: [American Society for Biochemistry and Molecular Biology \(ASBMB\)](#) [USPTO Full Text Retrieval Options](#)

SciSearch(R) Cited Ref Sci

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13578997 **Genuine Article#:** 897DJ **Number of References:** 35

The crystal structure of guinea pig 11 beta-hydroxysteroid dehydrogenase type 1 provides a model for enzyme-lipid bilayer interactions

Author: Ogg D; Elleby B; Norstrom C; Stefansson K; Abrahmsen L; Oppermann U; Svensson S (REPRINT)

Corporate Source: Biovitrum,Dept Struct Chem,SE-11276 Stockholm//Sweden/ (REPRINT); Biovitrum,Dept Struct Chem,SE-11276 Stockholm//Sweden/; Karolinska Inst,Dept Med Biochem & Biophys,SE-17177 Stockholm//Sweden/ (Stefan.Svensson@biovitrum.com)

Journal: JOURNAL OF BIOLOGICAL CHEMISTRY , 2005 , V 280 , N5 (FEB 4) , P 3789-3794

ISSN: 0021-9258 **Publication date:** 20050204

Publisher: AMER SOC BIOCHEMISTRY MOLECULAR BIOLOGY INC , 9650 ROCKVILLE PIKE, BETHESDA, MD 20814-3996 USA

Language: English **Document Type:** ARTICLE

Geographic Location: Sweden

Journal Subject Category: BIOCHEMISTRY & MOLECULAR BIOLOGY

Abstract: The metabolic reduction of 11-keto groups in glucocorticoid steroids such as cortisone leads to the nuclear receptor ligand cortisol. This conversion is an example of pre-receptor regulation and constitutes a novel pharmacological target for the treatment of metabolic disorders such as insulin resistance and possibly other derangements observed in the metabolic syndrome, such as hyperlipidemia, hypertension, and lowered insulin secretion. This reaction is carried out by the NADPH-dependent type 1 11beta-hydroxysteroid dehydrogenase (11beta-HSD1), an enzyme attached through an integral N-terminal transmembrane helix to the lipid bilayer and located with its active site within the lumen of the endoplasmic reticulum. Here we report, the

crystal structure of recombinant guinea pig 11beta-HSD1. This variant was determined in complex with NADP at 2.5 Å resolution and crystallized in the presence of detergent and guanidinium hydrochloride. The overall structure of guinea pig 11beta-HSD1 shows a clear relationship to other members of the superfamily of short-chain dehydrogenases/reductases but harbors a unique C-terminal helical segment that fulfills three essential functions and accordingly is involved in subunit interactions, contributes to active site architecture, and is necessary for lipid-membrane interactions. The structure provides a model for enzyme-lipid bilayer interactions and suggests a funneling of lipophilic substrates such as steroid hormones from the hydrophobic membrane environment to the enzyme active site.

Identifiers-- Key Word Plus(R): SHORT-CHAIN DEHYDROGENASES/REDUCTASES; **HYDROXYSTEROID DEHYDROGENASE**; MACROMOLECULAR STRUCTURES; ALCOHOL-DEHYDROGENASE; ANGSTROM RESOLUTION; RECOGNITION; REFINEMENT; SDR

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3/9/9 (Item 4 from file: 34)

Fulltext available through: [American Chemical Society](#) [USPTO Full Text Retrieval Options](#)
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13908152 **Genuine Article#:** 924EU **Number of References:** 30

Crystal structure of murine 11 beta-hydroxysteroid dehydrogenase 1: An important therapeutic target for diabetes

Author: Zhang JD (REPRINT) ; Osslund TD; Plant MH; Clogston CL; Nybo RE; Xiong F; Delaney JM; Jordan SR
Corporate Source: Amgen Inc, Dept Mol Struct, 1 Amgen Ctr Dr/Thousand Oaks//CA/91320 (REPRINT); Amgen

Inc, Dept Mol Struct, Thousand Oaks//CA/91320; Amgen Inc, Dept Pharmaceut, Thousand Oaks//CA/91320; Amgen Inc, Dept Prot Sci, Thousand Oaks//CA/91320 (zhang@amgen.com; sjordan@amgen.com)

Journal: BIOCHEMISTRY , 2005 , V 44 , N18 (MAY 10) , P 6948-6957

ISSN: 0006-2960 **Publication date:** 20050510

Publisher: AMER CHEMICAL SOC , 1155 16TH ST, NW, WASHINGTON, DC 20036 USA

Language: English **Document Type:** ARTICLE

Geographic Location: USA

Journal Subject Category: BIOCHEMISTRY & MOLECULAR BIOLOGY

Abstract: 11 β -Hydroxysteroid dehydrogenase type 1 (11 β -HSD1) catalyzes the conversion of 11-dehydrocorticosterone to its active form corticosterone in rodents (or cortisone to cortisol in humans). The reductive reaction of the 11-keto to 11-hydroxyl is the pivotal switch in the activation of glucocorticoids. An excess of active glucocorticoids has been shown to play a key role in metabolic disorders such as diabetes and obesity. Therefore, 11 β -HSD1 represents an important therapeutic target for the treatment of these diseases. To facilitate the iterative design of inhibitors, we have crystallized and determined the three-dimensional structures of a binary complex of murine 11 β -HSD1 with NADP(H) to a resolution of 2.3 Å; and of a ternary complex with corticosterone and NADP(H) to a resolution of 3.0 Å; by X-ray crystallography. The enzyme forms a homodimer in the crystal and has a fold similar to those of other members of the family of short chain steroid dehydrogenases/reductases (SDRs). The structure shows a novel folding feature at the C-terminus of the enzyme. The C-terminal helix insertions provide additional dimer contacts, exert an influence on the conformations of the substrate binding loops, and present hydrophobic regions for potential membrane attachment. The structure also reveals how 11 β -HSD1 achieves its selectivity for its substrate.

Identifiers-- KeyWord Plus(R): HEPATIC INSULIN SENSITIVITY; DEHYDROGENASE TYPE-1; HYDROXYSTEROID DEHYDROGENASE; ÅNGSTRÖM RESOLUTION; REDUCTASE; MICE; CRYSTALLOGRAPHY; ORIENTATION; ACTIVATION; COMPLEXES

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